

Six Further New Butterflies from Southern Africa

By C. G. C. DICKSON, M.Sc.*

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Stugeta bowkeri tearci subsp. nov.

This is a very widespread member of the *Stugeta bowkeri* group, occurring as it does in much of the Transvaal, Rhodesia and Botswana; and, what is apparently the same insect, in at least part of the northern portion of South West Africa. It is characterised by the more prominent, general, white marking of the upperside and, from the material that has been used for comparison, its rather greater average size than in nominate *bowkeri* — with the increase in size very noticeable, in fact, in a number of specimens that have been seen, including Rhodesian ones. In both sexes the tails of the hindwing, at the ends of the veins 1b and 2, are longer than in the nominate race; and the shorter tail is less short in relation to the longer one in the present race.

Male (Upperside)

In the forewing the greater prominence of the white marking in comparison with nominate *St. bowkeri* is especially apparent in the more basal part of areas 4 and 5 — and it is usually more noticeable, also, postmedially in areas 1b and 2 (particularly, as a rule, in 2). In the hindwing, the postmedial white marking generally extends further down the wing than in the nominate race, while it is also nearly always more clearly developed than in the latter race, on each side of the black or blackish marking close to and parallel with the margin, from area 5 downwards.

Underside

As in nominate race, if allowance is made for a small degree of individual variation in both races. The failure of the dark, irregular discal band of the forewing to extend outwardly in area 4 so as to coalesce at this point with the prominent line parallel with the distal margin, in some specimens, is a variable feature of no significance, since it occurs in both races, although perhaps less frequently in the present one.

Length of forewing: 15.25-18.25 mm (16.25 mm in holotype).

Female (Upperside)

The greater proportion of the white marking in relation to the nominate female, is possibly even more marked than in the respective males. In some female specimens there may be a greater proportion of white than blue colouring. (The nominate female does, however, itself bear more white than its own male).

Underside

As in nominate race, allowing for individual variation in specimens.

Length of forewing: 16.25-22.0 mm (18.5 mm in allotype).

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As regards the male genitalia, from specimens that have been examined there is a general tendency in the present taxon for the two spines at the distal end of the valve to lie closer to one another than in *bowkeri bowkeri*; also for the distal edge of the valve, beyond the point of origin of the spines, to incline more inwardly than in the latter taxon. There is not complete consistency in these features, but what appears to be an average difference in these respects may be considered to be of some significance in the case of subspecies of this group.

An appreciable number of subspecies of *St. bowkeri* have been described from north of the Southern African zone, largely from portions of East Africa. As far as it has been possible to ascertain, none of these agree with the presently described one, *tearei*, if all features which are characteristic are taken into account — including the valves of the male genitalia (*vide* Stempffer, *op. cit.*).

♂ Holotype, TRANSVAAL: Zoutpan [= Saltpan, Zoutpansberg], 17.ii.1969 (G. A. Henning); British Museum Reg. No. Rh. 18686.

♀ Allotype, TRANSVAAL: Saltpan, Zoutpansberg, 5.iv.1965 (S. F. Henning); British Museum Reg. No. Rh. 18687.

Paratypes in Coll. W. H. Henning: data as for holotype, one ♂ (G. A. Henning); 8.iv.1966, one female (G. A. Henning); 6.iv.1965, one ♂, three ♀♀, 15.ii.1969, one ♂ (S. F. Henning and, lastly, W. H. Henning); 17.ii.1969, one ♂, one ♀, 6.ix.1971, one ♂ (S. F. Henning); 13.iii.1974, one ♂ (I. Bampton). Horns Nek, Pretoria, 20.ix.1977, one ♀ (I.B.). Naboomspruit, 6.x.1977, one ♂ (I.B.); 8.x.1977, one ♂ (S.H.F.). Rашoop, 4.ii.1975, one ♂, 19.ix.1977, one ♂ (W.H.H.); 14.ix.75, one ♀ (G.A.H.); 10.x.1975, one ♂, 16.x.1975, one ♂, 28.xi.1976, one ♀ (I.B.). Sheba Mine, Barberton, 4.xi.1973, one ♀ (E. L. Pringle). Silkaats Nek, near Pretoria, 8.ix.1973, one ♂ (G.A.H.). (All these localities in the Transvaal, and a number of specimens bred examples.)

Paratypes in Coll. C. W. Wykeham: as holotype, 8.xii.1970, two ♀♀, 11 xii.1970, one ♀ (C.W.W.). Munnik, Tvl., 14.xii.1970, one ♂ (C.W.W.).

Paratypes in Coll. Dr. J. Kaplan: as holotype, 6.iv.1966, one ♂; 17.ii.1969, one ♂ (G. A. Henning); iii.1971, one ♀, 1.iii.1969, one ♀, 6.ix.1971, one ♂, one ♀ (Dr. J. Kaplan); Naboomspruit, 9.x.1967, one ♂ (W. H. Henning). Vila Luiza, Moçambique, 15.ix.1971, one ♀.

Paratypes in Coll. W. Teare: as holotype, iii.1959, one ♂, one ♀ (W.T.).

Paratypes in Coll. National Museum, Bulawayo, Rhodesia: Strijdom Tunnel, N. of Louis Trichardt, N. Tvl., 8.ii.1969, one ? (Dr. N. Paterson).

Paratypes in Coll. Transvaal Museum: as holotype, 24.iv.1954, one ♀ (R. Badham); iii.1959, one ♀ (W. Teare).

The above insect is named after Mr. W. Teare, of Benoni, Transvaal, with whom the author corresponded many years ago in connection with the regional variation which was apparent in populations of the present *Lycaenid* complex.

While the three taxa of the *Stugeta bowkeri* group which have been dealt with in this paper are the ones that have come to mind initially as particularly requiring attention, it is fully realised that there are others in Southern Africa which may call for further attention in due course — including, possibly, one that is prevalent in Natal. Specimens from the Eastern Karroo which have been examined have differed to some extent from the nominate insect (and have shown some approach to *henningi*), as have others, in their own way, from the Western Cape in localities such as Beaufort West and ones in the Robertson Karroo, between Robertson and Worcester (Trimen having found the butterfly at Robertson, as long ago as 1876). The same insect occurs at Montagu, but there are not as yet very many records from the Cape South-Western Districts. No firm conclusions with respect to the relative status of all the members of the group can be drawn without close examination of thoroughly representative material from all the relevant localities. A point which does strike one is the manner in which the group as a whole (as it occurs in Southern Africa) has been so largely neglected in the past from this point of view. Shortly before submission of this paper, Mr. W. H. Henning stated in a letter to the writer: "*Stugeta bowkeri henningi*, ex Potchefstroom, lives only on *Viscum* (Loranthaceae), and *St. bowkeri tearei* on *Ximenia caffra* (Sond.) (Oleaceae). They are not interchangeable".

The writer wishes to express his special thanks to Mr. W. H. Henning and his sons Stephen and Graham for their views covering the three taxa of this group and for the loan (and in some cases presentation) of invaluable material for study, dissection and description. A high proportion of the specimens concerned were either captured or reared by Mr. Ivan Bampton, to whom the writer is equally grateful for having made these available in the first place. Mr. G. E. Tite, of Tring, gave some useful views on the group, some time ago. The essential help rendered by Mr. R. I. Vane-Wright of the Dept. of Entomology, British Museum (Nat. Hist.) has already been referred to in the earlier part of this paper.

Poecilmitis wykehami spec. nov.

Although at a first glance this insect might be taken for *Poecilmitis turneri* Riley, at least from its upperside, careful comparison reveals a number of features which, in the writer's view, are sufficiently distinctive to entitle it to be regarded as a separate species. The most striking dissimilarity is noticeable on the underside of the hindwings and, from analogous cases in other species of the *P. thysbe* (L.) group which show close relationship to one another, this particular, decidedly well marked difference, is believed to be highly significant. This butterfly was found at an altitude of about 5,000 ft. above sea-level on the Hantam's Berg (in the

North Western Cape Province) — a fine mountain range which has received considerable attention, from the butterfly aspect, by the writer and, especially, Mr. C. W. Wykeham in more recent years. In the description which follows hereunder comparisons are made with *P. turneri* Riley (*Trans. R. ent. Soc. London.* 87 (10): 241-242, Pls. 1 and 2 (1938), from, and W. of, Matjesfontein in the Great Karroo. The specimen given as the allotype female, from Basutoland, in the foregoing paper is not being taken into account in the present context, the actual specimens of *turneri* utilised for direct comparison in this study being virtually topotypical ones from W. of Matjesfontein and occurring in true Karroo country.

In the male the distal margin of the forewings is noticeably more rounded and, in both sexes, the anal-angular projection of the hindwings is a little shorter than in *P. turneri*. Judging by the material on hand, the present species also has the orange-red ground-colour of the upperside of a rather brighter and more red tone than in *turneri*.

Male (Upperside)

Dark basal colouring of all wings practically black, as against the greyish tone in *turneri*. Discocellular streak of hindwing absent, or nearly so (usually present as a dark or fairly dark streak in *turneri*).

Underside

Blackish streak parallel with the distal margin of the forewing is continuous and not broken into separate markings as in *turneri*, while the dark spotting tends to be more distinct in the lower portion of the wing than in this species.

Hindwing with the spaces of light brownish ground-colour between the marking of the wing, more clearly and uniformly represented than in *turneri*. Marking in more basal portion of wing dark brown or even blackish-brown in parts, as against the essentially more rufous tone in *turneri*; and much more conspicuous than in this species. Light postdiscal marking and other light marking near base (of the characteristic *P. thysbe* type), clearly defined, and either whitish with little metallic sheen (as in the holotype) or silvery and markedly metallic; that of the postdiscal series consisting of short markings in nearly all cases, without the general tendency, in *turneri*, of a rather acute outward prolongation of several of these markings. The postdiscal series with adjoining dark marking of the same tone as that towards the base and also clearly developed; and the individual markings basad of and touching the light lituræ at least partly lunulate and dissimilar from any corresponding markings (should these be present, at all) in *turneri*.

Length of forewing: 12.5 mm (in both holotype and one paratype).

Female (Upperside)

Distal margin of forewing pronouncedly convex. Basal marking in all wings decidedly more restricted than in male and also less deep in tone; but this marking (and its extension

in hindwing within and along inner-marginal concavity) of a deeper or more blackish grey than in the female of *turneri*.

Underside

As in the male, generally, in all wings. Hindwing, in the allotype, particularly well marked, and also with a clouding of salmon tone distad of the postdiscal series and including quite a bright patch extending to the anal-angle.

Length of forewing: 13.0 mm (in allotype).

Body and ancillary parts, in both sexes, very much as in *P. turneri*.

♂ Holotype, WESTERN CAPE PROVINCE: Hantam's Berg, Calvinia, 4.iii.1978 (C. W. Wykeham); British Museum Reg. No. Rh. 18688.

♀ Allotype, W. CAPE PROVINCE: data as for holotype, 24.x.1977 (C.W.W.); British Museum Reg. No. Rh. 18689.

Paratype in Coll. C. W. Wykeham: data as holotype, one ♂ (C.W.W.).

Most of the specimens of the *P. turneri* group that have been seen from the Roggeveld Escarpment (Sutherland area) have shown affinity to *P. wykehami* as regards the form of marking of their hindwing undersides and even if this marking has not been quite as striking in its clarity as in the present insect. On this account, it is felt that such specimens are conspecific with *wykehami*, but with two races probably being represented in such a case. Some small differences in other respects are apparent in these populations. A few specimens have, however, been taken on the Escarpment with the hindwing underside quite as in *turneri*, and close to it, too, in various other features. This seems to suggest the occurrence of two species of the group in this area. The acquisition of still more material would be necessary before drawing any final conclusions.

Specimens of the group from the Nieuweveld Mountains, N. of Beaufort West, differ decidedly from true *P. turneri*, with the hindwing underside marking of the basic form of that of *wykehami* and the more common Roggeveld taxon, if not identical to that of either of these insects. Its relative status would not be easy to ascertain without further investigation based on fresher material than is at present available. The writer hopes to follow up the matter some time in the future.

The extreme Eastern Cape representative of the *P. turneri* group, *P. turneri amatola* Dickson & McMaster, was described in *Ent. Record J. Variation* 79 (9): 209-211, Pl. XI (1967). After considerably more experience of this group, it is believed, now, that on account of the constant and very clear-cut characters it exhibits in relation to topotypical *turneri* and other members of the group, it is probably a separate species in itself. The Nieuweveld Mountains taxon is alluded to in the above publication, with respect to the underside, but in spite of this being of a quite well marked form it is not truly comparable with that of *amatola*, and there are also other obvious differences between these butterflies. There are, in

fact, further representatives of this group, in the Western Cape, which are requiring investigation.

The present insect is named, with pleasure, after Mr. C. W. Wykeham.

Trimenia macmasteri mijiburghi subsp. nov.

Although not altogether unknown previously, this striking insect seems to have been found, more recently, in large numbers through the initiative of Mr. Rudi Mijurgh, of Pretoria, in deliberately investigating an unusual looking portion of small, white, stone covered veld between Steinkopf and Vioolsdrift, in Little Namaqualand, on 19th October 1977. Mr. Ivan Bampton had encountered it a few years previously in the same general area, and Mr. Charles Barrett found specimens at or near Goodhouse in October, 1962. Early examples which are in the South African Museum were collected by R. M. Lightfoot in Great Bushmanland early in the century. This butterfly is so distinctive in certain features that there seems little doubt about its being specifically distinct from any of the earlier described species of its genus. It is, however, most closely related to, and could possibly prove to be a subspecies of *Trimenia macmasteri*, which was described by the present writer in *Entomologist's Rec. J. Var.* **80** (4): Pl. V 89-92 (1968); and it is compared with this butterfly in the description which follows hereunder. A conservative approach as regards its status is adopted in the present paper, provisionally.

The forewings are more pointedly elongated (at least in the male) and their distal margin is usually more evenly curved (very evenly so in the female), while the lower portion of the hindwings tends, in the male, to form a rather more acute angle than in *T. m. macmasteri*.

Male Upperside

Forewing. Tawny-orange more extensive in costal region owing to absence of dark scaling in at least a very large portion and sometimes most of area adjoining costa; and the orange portion of the wing more red in tone than in *m. macmasteri*. Dark scaling below vein 1 either extending relatively densely to the expansion of black border at anal-angle (as in the holotype), or with a pronounced intervening break of the orange ground-colour. Apical portion of distal border may be widened basad and terminate more or less acutely near yellow spot below costa (but with some orange marking retained within this apical area, and even if very fragmentary), as in the holotype; or the border may only have some widening near the apex, and with a well-defined inner edge running downwards from the costa itself.

Hindwing

Much as in *m. macmasteri*, but the ground-colour of the same richer tone as that of forewing of present insect, and with less tendency to darkening of the veins which run through this area, than in the other taxon.

Underside

Allowing for individual variation in specimens, all wings differing little in basic detail from *m. macmasteri*. The exten-

sive orange colouring in the forewing deeper and the hindwing with the less dark portions of the background of brighter colouring, generally (sometimes even of a salmon tone — though more fawn coloured in the holotype), and usually contrasting more noticeably with the remaining dark portions, in comparison with *m. macmasteri*. The larger light markings tend, in most specimens, to show greater expansion than in the latter taxon.

Length of forewing: 13.25-17.0 mm (15.25 mm in holotype).

Female (Upperside)

More lightly marked, as a rule, than *m. macmasteri*.

Forewing. Almost clear ochreous-orange up to dark distal border, which, unlike that of *m. macmasteri* (or which is generally so, in its own case), is inwardly evenly curved without any extension basad near apex, and (in the allotype) with only slight diffuse scaling inwardly near anal-angle — or, in more darkly marked specimens, with a definite, small dark patch here, and, in which specimens, there is also some dark scaling beyond middle of wing, below costa.

Hindwing. No solid dark area extending basad of distal border but only diffuse scaling in upper portion of wing adjoining upper angle and costa, in the allotype — although a solid dark patch here, in more darkly marked specimens.

Underside

Basic marking much as in *m. macmasteri*, but most of background either lighter or of a brighter, more or less salmon tone. There is some general reduction in the size of the light marking, in the females of both taxa, though not always very noticeable and probably less so in the present insect.

Length of forewing: 18.5-19.5 mm (the former measurement, that of allotype).

♂ Holotype, WESTERN CAPE PROVINCE: Blesbergmyn, between Steinkopf and Vioolsdrift, 20.x.1977 (R. J. Mijburgh); British Museum Reg. No. Rh. 18690 .

♀ Allotype, W. CAPE PROVINCE: data as for holotype (R.J.M.); British Museum Reg. No. Rh. 18691.

Paratype in Coll. British Museum (Nat. Hist.): as holotype, 19.x.1977, one ♂ (R.J.M.).

Paratypes in author's collection: as holotype, 19.x.1977, two ♂♂ (R.J.M.). Goodhouse, x.1962, one ♂ (Charles Barrett).

Paratypes in Coll. R. J. Mijburgh: as holotype, 20.x.1977, twelve ♂♂, one ♀ (R.J.M.).

Paratypes in Coll. W. H. Henning: Steinkopf, W. Cape, 22.x.74, one ♂ (I. Bampton); 22.x.74, one ♂, one ♀ (M. Smith); 4.xii.1974, one ♀ (I.B.).

Paratypes in Coll. Transvaal Museum: data as holotype, three ♂♂, one ♀ (R.J.M.).

The opportunity has been taken to name this interesting and attractive member of its group after the writer's friend, Mr. R. J. Mijburgh, whose unbounded enthusiasm in the butterfly field has led to most interesting captures.